



DHS SCIENCE AND TECHNOLOGY

Webinar: Notice of Funding Opportunity for the Engineering Secure Environments from Targeted Attacks Center of Excellence – NOFO# ST-ESE-21-001



**Homeland
Security**

Science and Technology

February 4, 2021

Dr. Laura Parker

Sensors SME

Office of University Programs

Science and Technology Directorate

Webinar Information

Acronyms:

- COE = Center of Excellence
- NOFO = Notice of Funding Opportunity
- HSE = Homeland Security Enterprise
- ESE = Engineering Secure Environments from Targeted Attacks
- OUP = Office of University Programs

One solicitation for the ESE COE:

- **Center Lead** - applicants submit a proposal for the Center Lead and partners of their consortia

Please submit all questions in the Chat Box.

- Questions will be answered at the end of the webinar.
- Questions/answers will be posted on [grants.gov](https://www.grants.gov).

Questions about specific research themes, topics or questions will not be addressed during this webinar.

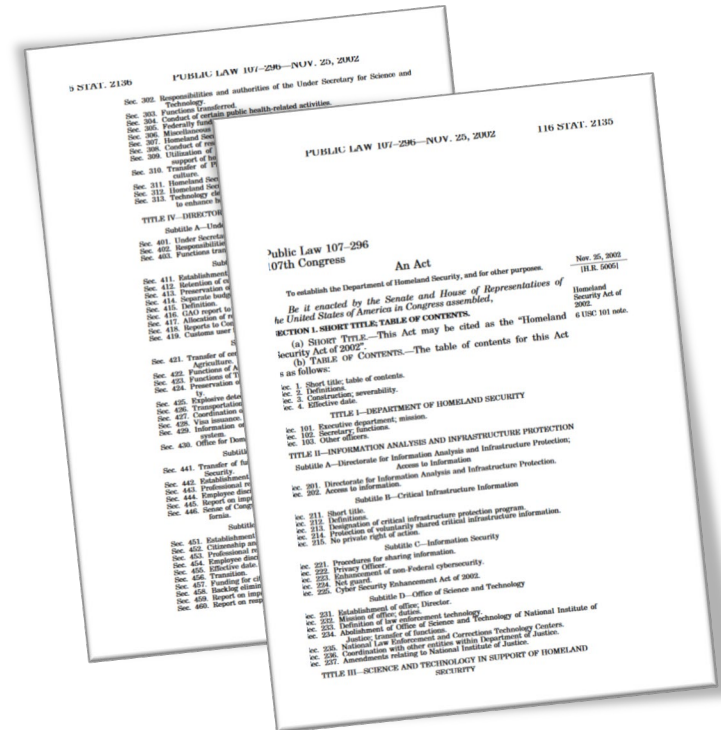
Agenda

- Overview of the Office of University Programs (OUP)
- The DHS Centers of Excellence (COEs)
 - OUP's expectations of a DHS COE
 - What does a COE do?
 - Establishing a new COE
 - Benefits of being a DHS COE
 - Who can apply?
 - Clarification about funding
- Review Process
- Tips to consider when applying as a Center Lead
- Q&A

Congressional Direction

Homeland Security Act 2002 - The Under Secretary for Science and Technology shall have the responsibility for:

- “[establishing] ... a coordinated, university-based system to enhance the Nation’s homeland security”
- “supporting United States leadership in science and technology”
- “merit review of research and development projects ... and the dissemination of research conducted or sponsored by the Department”



OUP executes this responsibility by applying a systematic program management process to partner with academic networks and associated private sector partners to study current and emerging problems, evaluate program risks, and test technical solutions.

S&T Office of University Programs

Bringing Innovation to Operations

S&T OUP manages a complex and broad portfolio of scientific investments focused on the investigation, experimentation, and evaluation of emerging science and technology in response to DHS Component needs.

Objectives:

- Generate, advance, and disseminate knowledge, prototypes, and technologies in support of DHS Component-identified operational and strategic challenges.
- Build a stable community of homeland security researchers and educators at U.S. colleges and universities capable of providing DHS with novel insights and approaches in diverse scientific domains.
- Strengthen the U.S. scientific leadership in homeland security research and education.
- Develop a permanent homeland security science and engineering workforce.

CENTERS OF EXCELLENCE

The COE network is a consortium of hundreds of universities conducting ground-breaking research to address homeland security challenges.

EDUCATION AND WORKFORCE DEVELOPMENT

OUP initiatives educate and train the current and future homeland security workforce in science and engineering professions.

MINORITY SERVING INSTITUTIONS

OUP builds a cadre of university students and faculty who are well-qualified, diverse and ready to enter the homeland security workforce.

Programs Managed by OUP

Centers of Excellence

COEs develop innovative, customer-driven homeland security science and technology solutions and train the next generation of homeland security experts.

- Each new university-based COE is a consortium competitively-awarded for a ten-year term
- Network of ten COEs and more than 200 partners

Minority Serving Institutions

The OUP Minority Serving Institutions (MSI) Programs diversify the academic institutions involved in the homeland security mission and train dedicated professionals who can sustain the homeland security and technology workforce.

- Scientific Leadership Awards – institutional awards to support the development of homeland security science and engineering teaching initiatives
- Summer Research Team Program – grants supporting summer research collaborations that engage early career faculty and students with the COEs

Workforce & Professional Development Initiatives

Workforce Development

- Create skilled university graduates and prepare them for the workforce through internships, fellowships and post-graduate opportunities
- Financially support students, provide students with experiential learning opportunities, and develop course content at the COEs and Minority Serving Institutions (MSIs)

Professional Development

- Deliver COE-developed courses and training materials to current homeland security science and engineering professionals
- Develop continuing education science and engineering courses, seminars and certificates for homeland security professionals



Value of S&T's Office of University Programs and the COE Network

OUP streamlines access to the expertise of the Nation's colleges and universities to address pressing homeland security needs:

- OUP makes it easy to tap into the intellectual power of America's universities for homeland security research, development and education.
- DHS Components can access academic expertise to answer research questions, deliver technical solutions, and build a highly specialized workforce.
- OUP Program Managers provide individualized service to DHS Components and assist with finding needed R&D capabilities within OUP's network of over 200 partner institutions.
- OUP offers established vehicles through which DHS Components and other partners can access the research and expertise found at the S&T COEs.

OUP Functions

OUP establishes and manages Centers of Excellence, Minority Serving Institution Programs, and Workforce and Professional Development Initiatives, including:

- Managing competitions and merit reviews
- Managing COE projects for DHS Components
- Establishing competed vehicles to provide access to COEs
- Establishing and managing academic-related vehicles
- Providing fellowship vehicles
- Matching Components with needed capabilities within the COE network
- Creating opportunities for the homeland security enterprise to interact with researchers

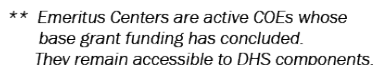
What are Expectations for COEs?

- COEs are funded through **cooperative agreements**, which enable and require substantial Federal agency involvement.
- Applicants for COEs should expect to:
 - Dedicate substantial time and resources to OUP and DHS.
 - Perform research management oversight.
 - Adapt to evolving homeland security challenges and priorities.
 - Identify and partner with leading researchers in relevant disciplines.
 - Develop sustained relationships with homeland security stakeholders.
 - Collaborate with other COEs and be actively engaged in the COE community.
 - Plan in advance for transition of research results to users and industry partners.

Current DHS Centers of Excellence



Homeland Security
Science and Technology



ADAC - Arctic Domain Awareness Center
ALERT - Center of Excellence for Awareness & Localization of Explosives-Related Threats
BTI - Borders, Trade, & Immigration Institute
CAOE - Center for Accelerating Operational Efficiency
CBTS - Cross-Border Threat Screening and Supply Chain Defense

CEEZAD - Center of Excellence for Emerging and Zoonotic Animal Diseases

CVADA - Center for Visualization and Data Analytics

CREATE - Center for Risk and Economic Analysis of Terrorism Events

FPGI - Food Protection & Defense Institute

IIAD - Institute for Infectious Animal Disease

PACER - National Center for the Study of Preparedness and Catastrophic Event Response

START - National Consortium for the Study of Terrorism and Responses to Terrorism

VACCINE - Visual Analytics for Command, Control & Interoperability Environments

CICCADA - Command, Control & Interoperability Center for Advanced Data Analysis

Department of Homeland Security Centers of Excellence Partnership Network

Alabama

Alabama A&M University* ●
University of Alabama – Joint Electronic Crimes Task Force, Tuscaloosa ●

Alaska

University of Alaska Anchorage (Lead, ADAC) ★
Alaska Maritime Prevention and Response Network, Anchorage ■

Arizona

Arizona State University (Lead, CAOEE) ★

Arkansas

University of Arkansas ●

Colorado

Arcadis – US, Highlands Ranch ■
Colorado State University ●
University of Colorado at Boulder ●
University of Denver ●
U.S. Air Force Academy ●

California

Chapman University, Orange ●
Monterey Bay Aquarium Research Institute (MBARI) - Moss Landing ■
San Diego State University* ●
Stanford University ●
University of California - Los Angeles ●
University of Southern California (Lead, CREATE) ★
Whittier College* ●

Florida

Florida International University* ●
Florida State University ●
University of Central Florida ●
University of North Florida ●

Georgia

Georgia Institute of Technology ●
Georgia State University ●

Illinois

Heartland Science and Technology Group, Champaign ■
Monmouth College, Monmouth ●

Syncrosis, Inc., Champaign ■

University of Illinois at Urbana-Champaign (Lead, CIRI) ★

Indiana

Purdue University (Co-lead, CVADA) ★
University of Notre Dame ●

Kansas

Anneal Initiative, Inc., Topeka ■
Kansas State University (Co-lead, ZADD) ★

Maine

Bigelow Laboratory for Ocean Sciences, Bigelow ■

Maryland

Army Research Labs, Adelphi ■
Johns Hopkins University (Lead, PACER) ★
University of Maryland (Lead, START) ★

Massachusetts

Boston University ●
Northeastern University (Lead, ALERT) ★
Massachusetts Institute of Technology ●
Tufts University ●
Woods Hole Oceanographic Institution (WHOI), Falmouth ■

Michigan

Michigan State University (Co-Lead, CAMRA) ★

Minnesota

University of Minnesota (Lead, FPD) ★

Missouri

University of Missouri, Food and Agricultural Policy Research Institute, Columbia ●

Mississippi

Jackson State University* (Lead partner, CRC) ★
Tougaloo College*, Tougaloo ●

Nebraska

University of Nebraska - Omaha (Lead, NCITE) ★
University of Nebraska - Lincoln ●

New Hampshire

University of New Hampshire, Coastal Response Research Center, Center for Spills in the Environment, Durham ●

New Jersey

Rutgers University, (Co-lead, CVADA) ★
Stevens Institute of Technology, (Lead, MSC) ★

New Mexico

New Mexico State University* ●
RS21 ■

New York

John Jay College* ●
New York University ●
Rensselaer Polytechnic Institute ●
The State University of New York - Albany ●
The State University of New York - Buffalo ●
The City College of New York ●

North Carolina

Duke University ●
Eastern Carolina University ●
North Carolina Agricultural and Technical State University* ●
North Carolina Central University* ●
North Carolina State University ●
Predigen, Durham ●
Renaissance Computing Institute (RENCI) ●
Seahorse Coastal Consulting, Moorehead City ■
University of North Carolina - Charlotte ●
University of North Carolina at Chapel Hill (Lead, CRC) ★

Ohio

Ohio State University, Columbus ●

Oklahoma

Oklahoma State University ●
University of Oklahoma ●

Oregon

Oregon State University ●

Pennsylvania

Carnegie Mellon University ●
Drexel University (Co-Lead, CAMRA) ★
Pennsylvania State University ●

* Minority Serving Institution

** Emeritus Centers are active COEs whose base grant funding has concluded. They remain accessible to DHS components.

Department of Homeland Security Centers of Excellence Partnership Network

Puerto Rico

University of Puerto Rico at Mayaguez* ●

Rhode Island

University of Rhode Island ●

Tennessee

Oakridge National Laboratory, Oakridge ■

Tennessee State University* ●

University of Tennessee, Knoxville ●

Texas

Hunt Institute for Global Competitiveness, The University of Texas at El Paso ●

Norman Borlaug Institute for International Agriculture ■

Prairie View A&M University* ●

Texas Agrilife Research, College Station ●

Texas A&M University - Galveston ●

Texas A&M University (Lead, CBTS) ★ (Co-lead, ZADD) ★

Texas Southern University ●

University of Houston (Lead, BTI) ★

University of Texas - Austin ●

University of Texas at El Paso* ●

University of Texas at San Antonio* ●

Virginia

George Mason University (Lead, CINA) ★

Karthik Consulting, LLC, Reston ■

Liberty University, Lynchburg ●

William and Mary College, Williamsburg ●

Washington

University of Washington ●

University of Washington, Center for Conservation Biology and Conservation Canines Programs, Eatonville ●

Washington State University at Pullman ●

Washington, D.C.

CT Strategies ●

The George Washington University (Lead, MBA STT) ★

Howard University* ●

Migration Policy Institute ●

Mission Critical Institute ●

University of the District of Columbia* ●

Australia

Victoria University, Melbourne ●

Canada

Carleton University, Ontario ●

Flare Systems, Inc., Quebec ■

University of Waterloo, Ontario ●

England

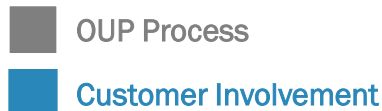
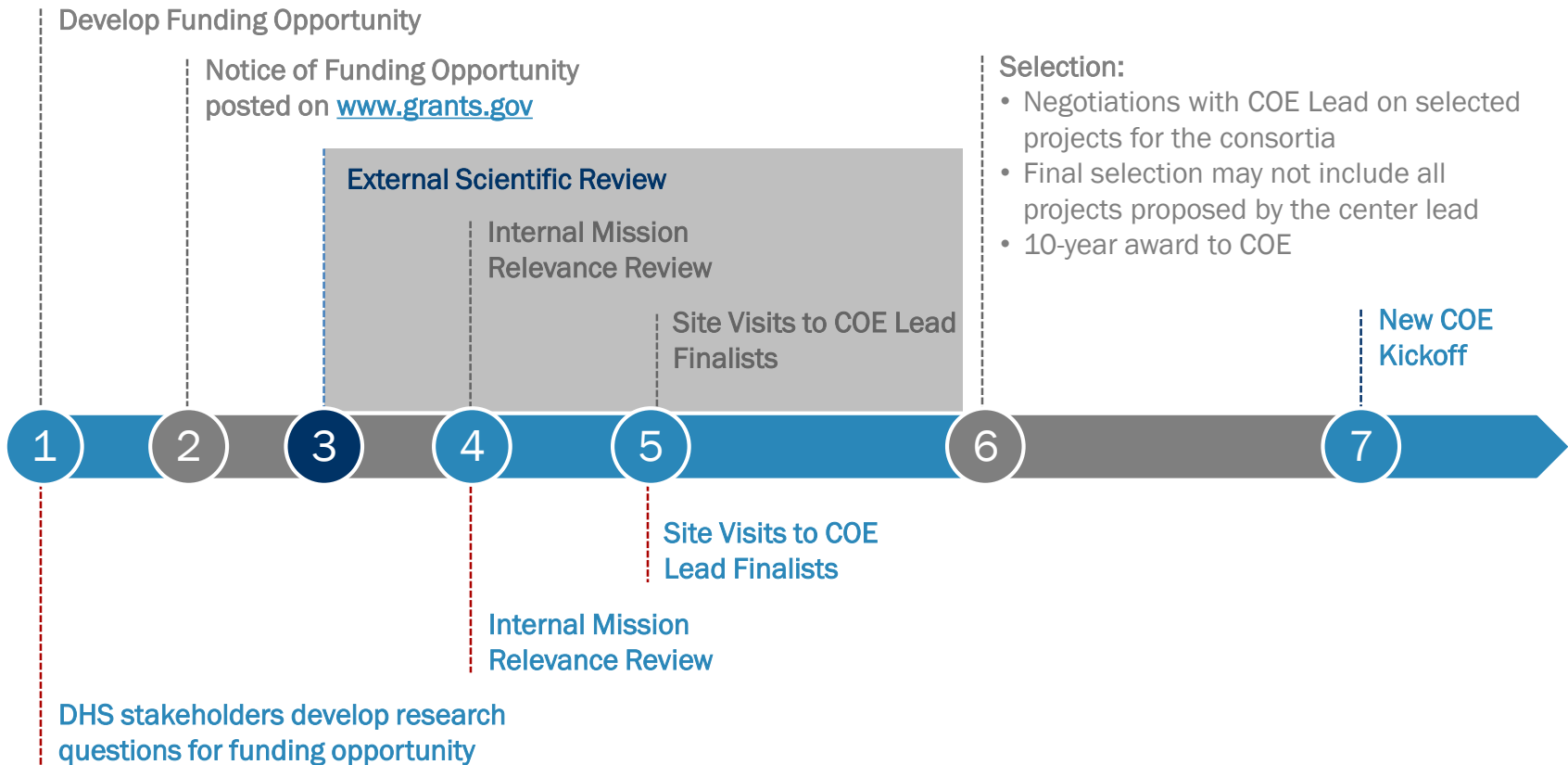
King's College, London ●

* *Minority Serving Institution*

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COE Review Process

S&T uses a three-phase review process designed to identify and select high potential applicants



NOTE: *Not all proposed projects in a COE Lead application are likely to be selected.*

How Are COE Topics Identified?

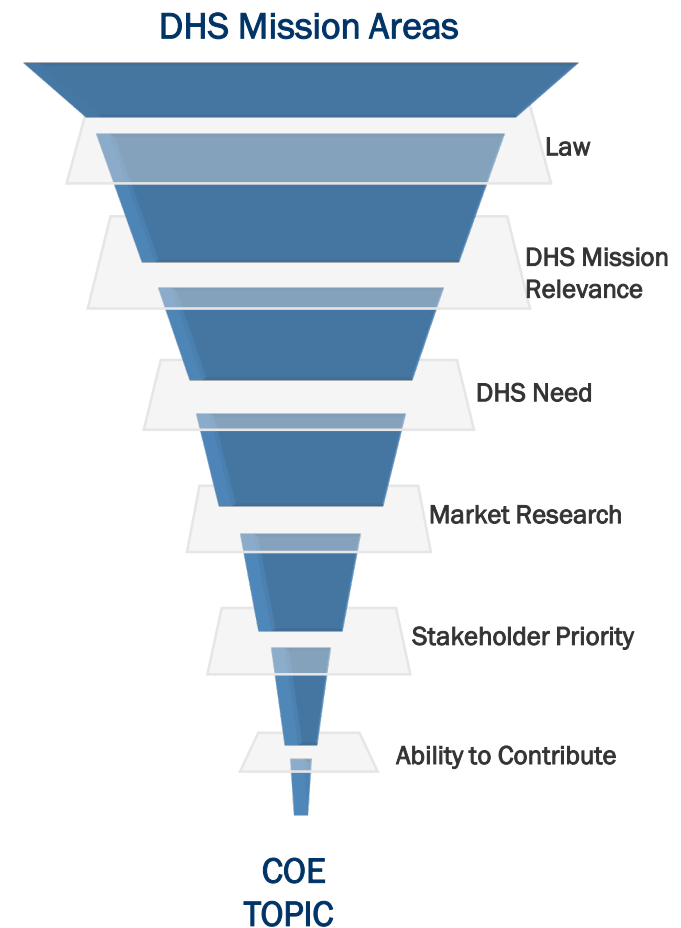
S&T has established a thorough and rigorous process to examine and identify the topics for new COEs. This four-month evaluation framework consists of two phases, throughout which S&T determines how a proposed COE topic satisfies the following:

Phase 1: Strategic Assessment

- It must be a priority for Congress, the Administration, DHS Leadership, DHS Components, and/or First Responders.
- The topic must serve a significant DHS mission and continue to be a DHS priority in the future.
- It must address a real knowledge gap.

Phase 2: Topic Refinement

- It must be a uniquely DHS problem with no other agencies' research programs sufficiently addressing it.
- A COE must be able to make a significant contribution with available resources and academic constraints.



Establishing a New COE: Evaluation Process and COE Selection

- Funding Opportunity Announcement is posted on www.grants.gov
- Evaluation Process
 - External panel scientific review and recommendations
 - Internal panel DHS relevancy review and priority selections
 - Site visits with DHS subject matter experts to Lead Institution finalists to assess management
- Selection
 - Selection of new COE Leads and Partners of the consortia
 - Negotiations with COE Leads, including COE subcontracting and approval process
 - 10-year award to COE

NOTE: *Not all proposed projects in a COE Lead application are likely to be selected.*

Establishing a New COE: Post-Award Standup

- Initial Work Plan for Year 1
 - OUP-facilitated Work Plan Development Workshop.
- After Year 1, research projects may be refined, developed or evaluated through:
 - Workshops with stakeholders and end users to identify new gaps and research needs.
 - Advisory committees – OUP will establish a Board of Directors to provide guidance to OUP.
- Biennial Reviews – OUP will conduct a formal review every 2 years with a SME review committee to evaluate the research and reallocate resources as necessary.

Why Should You Apply?

Being a COE Lead or Partner is a unique opportunity to:

- Work on real homeland security challenges.
- Develop solutions to make the nation safer, more secure, and resilient against terrorism.
- Work closely with a combination of:
 - homeland security operational personnel including local, state, and other federal agencies
 - scientific subject matter experts
 - industry and nonprofit organizations
- Foster and enable high-level, inter-agency and public-private partnerships and collaboration.

Who Can Apply?

- Any accredited U.S. institution of higher education
- Center Lead
 - Only one (1) application for Center Lead will be accepted from any single university
 - Center Partners – are part of the consortia with the Center Lead, with COE Partners submitted through the Lead institution's application
 - Center lead applicants are strongly encouraged to partner with industry, other academic institutions, including historically black colleges and universities (HBCUs), Hispanic serving institutions (HSIs), and/or other MSIs; institutions in states that are part of the Experimental Program to Stimulate Competitive Research (EPSCoR); public sector institutions, and non-profit organizations, including any organizations that meet the definition of nonprofit in OMB Circular A-122, relocated to 2 CFR Part 230.
- FFRDCs or laboratories funded by federal agencies may not apply as Center Leads. FFRDC employees may cooperate or collaborate with eligible applicants within the limits imposed by applicable legislation, regulations, and DHS policies.

Clarification about Funding

- Based on congressional appropriations, COEs are funded up to \$3.65 million/year for the selected Center Lead and their network of Partner institutions.
- DHS awards the yearly funding award to the Center Lead.
- COE Partners are part of the Center Lead portfolio and are funded up to \$3.65 million/year award to the Center Lead institution.
- The Center Lead administers funding to all DHS-selected projects, including funding Partner projects that have been incorporated into the newly formed Center.

Tips for Applying

- Read the entire NOFO.
- Develop a diverse but integrated multi-institutional, multidisciplinary team.
- Structure projects to be measurable and managed using technical and programmatic milestones.
- Demonstrate your knowledge of the DHS organizational structure and its operational missions.
- Familiarize yourself with past and current research at the current COE Network at <https://www.dhs.gov/st-centers-excellence>
- Plan for transitioning research results or technologies.
- Create a matrix – did you address everything?
- Review the checklist.

Overall Review Process

Competition Dates:

- Posting of Funding Opportunity Announcement: January 5, 2021
- Submission of Proposals by Closing Date: March 10, 2021

Three-tiered Review:

Scientific Quality Review (External Review): Anticipated April 2021

- Focus on the research quality and influence, the education program, and the appropriateness of the costs.

DHS Relevancy Review (Internal DHS SMEs): Anticipated May 2021

- Focus on the mission relevance of the proposed research, education and outreach programs and the applicant's demonstrated capabilities.

Site Visit Review: Anticipated May 2021



Homeland Security

Science and Technology

DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS